291 available. Large tules were pulled into strips;
286 they and whole small tules were pounded with a wooden stick on rock (usually the bedrock mortar where good working space was provided) until softened and pliable. Any of these materials, when made into aprons, was twined along one edge with willowbark string (ša'). One row of twining held the fibres together; a second, below the first, included the bent-over ends which had been turned down on the outside. Both rows of twining continued into a twisted two-strand belt. When asked why two aprons were made rather than one continuous skirt, M.L. said the back "wore out too fast"; hence the replaceable sections.

292 On dress occasions aprons of deerskin (ki'nəp) were worn, sometimes put on over the fibre aprons (fig. 8, b). The front apron of deerskin was edged with deer hoofs which rattled prettily. Not all women could afford these. M.L. spoke proudly of having such an apron which her mother had made for her first puberty ceremony. Women whose husbands were poor hunters or had other vocations bought deerskin and hoofs for themselves.

291 The basket cap (waki'ñuts) was always
285 coiled, of a shape similar to the small individual mush basket. It was used only when
[482] carrying a heavy load with the tumpline (M.P.). While the cap is said to have been invariably coiled, a museum specimen (U.C. 1/2958; no provenience other than Yokuts) is a small, diagonally twined "bowl" (7-1/2"x 8" diameter at rim, 4-3/4" deep), palpably old and undoubtedly a cap. Its rim is bound with buckskin and is patched with buckskin at a point where a tumpline would have worn it. It is patterned with a wide band of double zigzag at the edge and a band of single zigzag near the base. There is no other piece like it in the Yokuts collection and it is presumably introduced from an outside source, possibly Miwok or Pomo. The attempt to preserve it by repair even suggests that it might have been valued because of its oddity among the Yokuts.

301 Ear ornaments (po') were differentiated from men's only by having two long strands of beads added; they were then called yau'wakan.

302 Women's hair was long save during the
[765] period of active mourning, when it was singed close to the head if grief were deep, to the shoulders for a lesser bereavement. Like men's it was parted in the middle and, at work, was tied at the nape of the neck, but the front hair was usually singed off to form bangs. Both sexes washed the hair with soaproot suds and brushed it with soaproot brushes.

[237
38] On special occasions eagle down was stuck on the bangs and fore hair with soaproot glue.
292 An ornamental headband (hoči'n) worn by women was woven of fine milkweed string by the usual "sewing" technique for belts and had beads introduced to form a diagonal pattern. The band was 2 to 3 inches wide, long enough almost to

Not every man could make this kind of bow, but B.O. did not think that the art was confined to families. He stated that the Wobonuch made the best bows; the glue on theirs was clear, that on Waksachi bows murky.

For all types of shooting the bow was held in the left hand, with its left end about 30 degrees above horizontal. The left hand was so held that the joint of the third (middle) finger was slightly higher than that of the second (index) finger so that a groove or slight hollow was formed between the third finger and thumb[156] in which the arrow rode (fig. 10, h, Pt. I). Only one type of arrow grasp was used, that between the thumb and first bent joint of the second (index) finger (primary release); there was no hold on the string itself (fig. 10, i, Pt. I). Arrow butts were not thickened.

Four forms of arrow were distinguished: those for birds (pa·ga); for squirrels, rabbits, fox and other small game (pa·ga); for deer or vicious animals such as wildcat, cougar, and bear (u·'tipa·ga); and for war (gai·'wani). The first was of alderwood (napa·'ap[a]) in a single piece. When scraped down with an obsidian blade, these were straightened by being heated over coals, bent and turned in the hands and over the knee. The self-points were ground down on stone and hardened by heating. The feathering was of three split feathers from a hawk wing. The butt was nocked.

For shooting birds a simple alderwood arrow was tipped with four small crosspieces tied on perpendicularly to the shaft (fig. 10, d, Pt. I); the butt was not feathered.

The deer and war arrows were made of a single shaft of cane (ka'dk:d, Michahai; ha'ob[1], Waksachi), the former long, the latter short. Both had obsidian points. To shape a cane arrow a heated stone arrow straightener was used; the cane itself was not heated. The cane, cut to the desired length, was grasped at each end and pulled back and forth across the stone groove with a rolling motion. It was sighted down its length for straightness.

The tip end, which had been squared off, was wrapped with six turns of fine sinew cord about three inches from the end. Then the end was turned on a sharp wooden point to open up the partition in the cane, for it had been cut off just before a joint, (the boring process was called marasa'gomi o'o'homa, to-make-a-hole bone-drill). Into the hole thus made was inserted the flint point (fig 10, f, Pt. I). The points for deer arrows were nearly round in cross section and had a round stem. They were obtained in rough form from the Eastern Mono of Owens Valley and dressed locally. With this type of point no force other than wedging held it in place (fig. 10, g, Pt. I); it remained in the wound. Wood points were often substituted.

[156] The thumb is regarded as the first finger herein.

W Y 224 [381] portion; otherwise all parts were regarded as equivalent in quality.

Fall was the favorite time for hunting deer although no seasonal restrictions were observed. In the spring, bucks with soft horns would be killed in order to secure the horns for glue.

Bear hunting.---B.O.'s father's brother, Wanuk, was a fine hunter; he used the following method, as did some other intrepid hunters. A feeding ground of a bear was selected, and during the animal's absence the hunter arranged a crude scaffold of logs in an oak tree above the feeding place.[159] Before sundown the man took up his position on the scaffold where he must remain all night. During the night, usually just before dawn, the bear came, and the hunter, to encourage him, dropped down acorns from above. As the bear fed and eventually turned in a vulnerable position, the hunter shot. Should the bear discover the man above and not be fatally wounded, he might climb the tree in a rage. As the bear died or staggered to a safe distance, the man descended and went home to get help in taking the carcass to the village. The meat was divided among his family, friends, and helpers; naturally no one with a Bear totem was involved in the killing or eating. The hide and claws were "sold to a person with Bear ibuk." The hunter did not indulge in any formulaic address or ritual before or after killing a bear.

W Y [825]

W Y

Both B.O. and S.O. said it was not essential to have a dream helper to be a skillful hunter. One might get supernatural aid for this from Cougar (B.O.'s dream helper), but normally "if a man was a good hunter, his son would be too." A special term, ha ha̍s (Michahai), was applied to a hunter "who was so good he could kill anything."

224 776

W Y 224 Squirrel smoking.---Ground squirrels (šiti ʾla, Waksachi) were plentiful in the foothills. Usually one man, seldom more than two, would hunt them by smoking them out of their holes. Boys often helped. This method was called ili ʾni mak šiti ʾla (fanning we squirrels). All vegetation was carefully removed from around entrances to runways. Then dried grass or weeds "of any kind" were stuffed into the holes, packed in as tight as possible. An area about fifty feet square would be so treated, with about six holes in the center left open. Then the grass was ignited and the men or boys went from hole to hole, fanning into them with feather fire fans. Smoke would ooze out of the open holes and soon squirrels would stagger forth. The hunters grabbed them and wrung their necks. The animals could be heard underground running and squeaking, and when all was silent the holes were dug open to secure those which had suffocated.

Cottontails were sometimes smoked out of their burrows in the same manner.

[159] Mentioned by Kroeber as a Yokuts method (ibid., 529).

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29
Yowlumne

411 Sinew-backed juniper bows were recurved at the tips and carried a longer string than other bows of the same length. The sinews for backing were taken from the loin of the deer in wide strips and were glued to the back of the bow with a glue made from deer horns and hoofs. The bow was wider and flatter than the common bows and was narrowed in the middle for a hand grip. Strings for these bows were made of sinews from the loin of the deer.

411 281 Bow covers were often made of skin from the tails of mountain lions. When such could not be had, any skin was sewed into a bow cover. Quivers for holding arrows were often made of untanned antelope skin with the hair left on. When it could be secured, the Yokuts hunter liked the skin of a fox for a quiver. The entire skin was used. Even the skin of the head was used, the mouth and eye openings being sewed shut with sinews. The tail was left on the skin and the skin of the hind legs used for attaching a shoulder strap.

411 Yokuts arrows are the most refined and varied of all their hunting equipment. No less than seven kinds of arrows were commonly used by Yokuts hunters. All but two of these were made of two pieces, or with a fore-shaft. Aged Yowlumne Yokuts have stated that once they used only a one-piece arrow like those used by their neighbors to the east. These were tipped with an obsidian, or volcanic glass point, or with a similar point made of jasper, chalcedony, or some other stone which chipped easily. Another one-piece arrow was made by children and by men for use in a game, or to shoot small animals like gophers, mice and rats at short range. They were feathered, but had no stone point. The end of this arrow shaft was pointed and hardened in the fire.

There are several important reasons why a two-piece arrow was used by the Yokuts. First of these is the fact that it was very difficult to find or to make straight a one-piece arrow shaft as long as was used by Yokuts hunters. A second reason for using a two-piece arrow was that when game was missed, the stone point was almost always damaged. This made useless a valuable shaft until it could be taken to camp and repointed. The importance of this can be understood when it is known that a Yokuts hunter generally carried fewer than a half dozen arrow shafts. As many as two dozen fore-shafts were carried in a bag attached to the gee string.

7:Powers J-5 (1871-1876) 1877 NS29 Yokuts NS29

liberally of their substance. But he was yet an unknown prophet. They were incredulous, and mostly laughed him to scorn, whereupon he would leave the village in high dudgeon, denouncing war upon their heads, and threatening them with a continuance of the drought another year far worse than before. Sure enough, the enraged Hopodno brought drought a second year, and the Indians were smitten with remorse and terror, believing him endowed with superhuman power; and when next year he made a second pilgrimage, offerings were showered upon him in abundance, and men heard him with trembling. He compelled them to pay him fifty cents apiece, American money, and many gladly gave much more. And he made rain.

As to their implements and weapons, there are some interesting particulars to be noted. Here, as everywhere on the Sacramento and Joaquin plains, the Indians make no bows, but purchase them all from the mountaineers. This is because they have no cedar. This wood is extremely brittle when dry, and is then the poorest possible material for bows; but by anointing it every day with deer's marrow while it is drying the Indian overcomes this quality and renders it the best. The bow is taken from the white or sap wood, the outside of the tree being also the outside of the bow. It is scraped and polished down with wonderful painstaking, so that it may bend evenly, and the ends are generally carved so as to point back slightly. Then the Indian takes a quantity of deer's sinew, splits it up with flint into small fibers, and glues them on the outside or flat back of the weapon until it becomes semi-cylindrical in shape. These strings of sinew, being lapped around the end of the bow and doubled back a little way, impart to it its wonderful strength and elasticity. The glue is made by boiling the joints of various animals and combining the product with pitch.

I saw a bow thus carefully made in the hands of an aged chief, and it was truly a magnificent weapon. It was about five feet long, smooth and shining—for when it becomes a little soiled the fastidious savage scrapes it slightly with flint, then anoints it afresh with marrow—and of such great strength that it would require a giant to bend it in battle. For lack of skins the owner carried it in a calico case. The string, composed of twisted sinew, was probably equal in strength to a sea-grass rope of three times its diameter.